

Application No. 09/882,351

2. The method of claim 1, wherein said coating step is carried out by using an agglomerator or a spray dryer.

3. The method of claim 1, wherein said conductive polymer is selected from the group consisting of polypyrrole, polyaniline, polythiophene, polyacetylene, derivatives thereof, and mixtures thereof.

4. The method of claim 3, wherein said conductive polymer is emeraldine base or a polymer in doping state.

5. The method of claim 1, wherein said coating solution further comprises a conductive agent.

6. The method of claim 1, wherein said coating solution further comprises a conductive agent and an ionic conductive polymer.

7. The method of claim 6, wherein said ionic conductive polymer is selected from the group consisting of polyethylene oxide, polypropylene oxide, polyethylene glycol, derivatives thereof, salts thereof and mixtures thereof.

8. The method of claim 1, wherein said lithium complex metal oxide is selected from the group consisting of $\text{Li}_x\text{Mn}_{1-y}\text{M}'_y\text{A}_z$, $\text{Li}_x\text{Mn}_{1-y}\text{M}'_y\text{O}_{2-z}\text{A}_z$, $\text{Li}_x\text{Mn}_2\text{O}_{4-z}\text{A}_z$, $\text{Li}_x\text{Mn}_{2-y}\text{M}'_y\text{A}_4$, $\text{Li}_x\text{M}_{1-y}\text{M}''_y\text{A}_2$, $\text{Li}_x\text{MO}_{2-z}\text{A}_z$, $\text{Li}_x\text{Ni}_{1-y}\text{Co}_y\text{O}_{2-z}\text{A}_z$, $\text{Li}_x\text{Ni}_{1-y-z}\text{Co}_y\text{M}''_z\text{A}_\alpha$, and $\text{Li}_x\text{Ni}_{1-y-z}\text{Mn}_y\text{M}'_z\text{A}_\alpha$, wherein $0.95 \leq x \leq 1.1$, $0 \leq y \leq 0.5$, $0 \leq z \leq 0.5$, $0 < \alpha \leq 2$, M is Ni or Co, M' is at least one element selected from the group consisting of Al, Ni, Co, Cr, Fe, Mg, Sr, V, Sc, Y, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Ac, Th, Pa, U, Np, Pu, Am, Cm, Bk, Cf, Es, Fm, Md, No, and Lr, M'' is at least one element selected from the group consisting of Al, Cr, Mn, Fe, Mg, Sr, V, Sc, Y, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Ac, Th, Pa, U, Np, Pu, Am, Cm, Bk, Cf, Es, Fm, Md, No, and Lr, and A is selected from the group consisting of O, F, S and P.

9. The method of claim 8, wherein said lithium complex metal oxide is selected from the group consisting of $\text{Li}_x\text{Mn}_{1-y}\text{M}'_y\text{A}_2$, $\text{Li}_x\text{Mn}_{1-y}\text{M}'_y\text{O}_{2-z}\text{A}_z$, $\text{Li}_x\text{Mn}_2\text{O}_{4-z}\text{A}_z$, and $\text{Li}_x\text{Mn}_{2-y}\text{M}'_y\text{A}_4$.

10. The method of claim 1, wherein the amount of coated conductive polymer ranges from 1 to 30 wt% based on the weight of the lithium metal oxide.

11. The method of claim 1, wherein the amount of coated conductive polymer ranges from 1 to 10 wt% based on the weight of the lithium metal oxide.

12. The method of claim 1, wherein the lithium complex metal oxide is coated with the coating solution to form a coating layer having a thickness ranging from 0.1 to 1 μm .

13. (Amended) The method of claim 1, wherein the lithium complex metal oxide [is] particles are coated generally evenly over their entire surfaces.

14. (Amended) A method of preparing positive active material for a lithium secondary battery comprising:

preparing a coating solution by dissolving a conductive polymer in a solvent; and

coating lithium-containing manganese-based metal oxide particles with the coating solution to thereby encapsulate the particles with the coating solution.

15. The method of claim 14, wherein said conductive polymer is selected from the group consisting of polypyrrole, polyaniline, polythiophene, polyacetylene, derivatives thereof, and mixtures thereof.

16. The method of claim 14, wherein said coating solution further comprises a conductive agent and an ionic conductive polymer.

17. The method of claim 16, wherein the amount of coated conductive polymer ranges from 1 to 30 wt% based on the weight of the lithium metal oxide.

18. The method of claim 16, wherein the amount of coated conductive polymer ranges from 1 to 10 wt% based on the weight of the lithium metal oxide.

19. The method of claim 16, wherein the lithium complex metal oxide is coated with the coating solution to form a coating layer having a thickness ranging from 0.1 to 1 μm .

20. (Amended) The method of claim 16, wherein the lithium complex metal oxide [is] particles are coated generally evenly over their entire surfaces.

21. (New) The method of claim 1, wherein the lithium complex metal oxide particles are coated over their entire surfaces.

22. (New) The method of claim 14, wherein the lithium complex metal oxide particles are coated over their entire surfaces.

REMARKS

Claims 1 to 22, as amended, are pending. Applicant has amended claims 1, 13, 14 and 20, and added new claims 21 and 22. Attached hereto is a marked-up version of the changes made to the above-identified application by the current amendment, which is captioned "Version with markings to show changes made." The amendments find full support in the original specification and claims. In particular, the amendments to claims 1 and 14 find support in the specification at page 4, line 26, to page 5, line 2. No new matter is presented. In view of the above amendments and following remarks, Applicant respectfully requests favorable reconsideration and a timely indication of allowance.

The Examiner rejected claims 1, 3, 4, 12 and 13 under 35 U.S.C. § 103(a) as allegedly unpatentable over Koksang et al. (U.S. Patent No. 5,368,959) in view of Kinard et al. (U.S. Patent No. 5,888,582). The Examiner rejected claims 8, 9, 14 and 15 under 35 U.S.C. § 103(a) as allegedly unpatentable over Koksang in view of Kinard and further in view of Takashashi et al. (U.S. Patent No. 5,679,480). The Examiner rejected claim 5 under 35 U.S.C. § 103(a) as allegedly unpatentable over Koksang in view of Kinard and further in view of Tasaka et al. (U.S. Patent